



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/824,174

04/14/2004

John Vaughan

18158

6357

26794 7590 09/27/2007

TYCO TECHNOLOGY RESOURCES  
4550 NEW LINDEN HILL ROAD, SUITE 140  
WILMINGTON, DE 19808-2952

EXAMINER

KANE, CORDELIA P

ART UNIT

PAPER NUMBER

2132

MAIL DATE

DELIVERY MODE

09/27/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/824,174	VAUGHAN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Cordelia Kane	2132	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 August 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,5-11,13 and 16-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-11,13 and 16-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/24/06, 8/23/07</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments, see Remarks, filed August 23, 2007, with respect to the rejections of claims 1 – 24 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new grounds of rejection is made.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1, 3, 5 – 7, 10, 11, 13, 15 – 17, and 20 – 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over James Ashby et al's US Patent 5,150,401, and further in view of Claude Henderson et al's US Patent 4,134,070. Referring to claims 1, 5 25, Ashby discloses:

- a. A microphone for receiving an audible input and converting said analog input into an analog signal (column 5, lines 4-6).
  - b. A digitizer for creating a digital signal from said analog signal, and a voice coding device for creating a voice coded signal from said digital signal (column 5, lines 6-9).
  - c. Encrypting said voice coded (column 5, lines 14-18).
  - d. A modulator coupled to receive said encrypted signal for generating an analog output capable of being received by a two way radio (column 5, lines 21-23).
  - e. A cable connected to said two way radio to provide said analog output (column 7, lines 4-8).
5. Ashby does not explicitly disclose that the cable is detachable. However, Henderson discloses a radio with a detachable control plate, removable head and cable (column 3, lines 11-12). Henderson also discloses that these are detached from a plug (column 5, lines 49-52). Ashby and Henderson are analogous art because they are from the same field of endeavor, radio communication. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Ashby and Henderson before him or her, to modify the radio of Ashby to include the detachability of Henderson. The suggestion/motivation for doing so would have been to have different mounting arrangements (column 3, lines 31-33).
6. Referring to claim 3, Ashby discloses an amplifier coupled to the digitizer and microphone for amplifying said electrical signal (column 7, lines 39-40).

Art Unit: 2132

7. Referring to claim 6, Ashby discloses that the encryption comprises software (column 8, lines 35-39). Ashby states that the device is designed to perform the encryption, which includes storing software to perform the encryption.
8. Referring to claim 7, Ashby discloses memory for storing an encryption key (column 8, lines 48-49).
9. Referring to claim 10, Ashby discloses:
  - f. Demodulating the signal to a voice coded signal (column 11, lines 68-column 12, line 2).
  - g. Decrypting said voice coded signal (column 12, lines 12-14).
  - h. Generating a digital signal from said decrypted voice coded signal (column 12, lines 14-15).
  - i. Converting said digital voice signal to said analog electrical signal (column 12, lines 18-19).
  - j. A speaker for outputting said analog signal to an audio signal (column 12, lines 23-25).
10. Referring to claims 11 and 26, Ashby discloses:
  - k. A cable to provide encrypted analog signal from said two way radio to the microphone unit (column 7, lines 4-8).
  - l. Demodulating the signal to a voice coded signal (column 11, lines 68-column 12, line 2).
  - m. Decrypting said voice coded signal (column 12, lines 12-14).

- n. Generating a digital signal from said decrypted voice coded signal (column 12, lines 14-15).
  - o. Converting said digital voice signal to said analog electrical signal (column 12, lines 18-19).
  - p. A speaker for outputting said analog signal to an audio signal (column 12, lines 23-25).
11. Ashby does not explicitly disclose that the cable is detachable. However, Henderson discloses a radio with a detachable control plate, removable head and cable (column 3, lines 11-12). Ashby and Henderson are analogous art because they are from the same field of endeavor, radio communication. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Ashby and Henderson before him or her, to modify the radio of Ashby to include the detachability of Henderson. The suggestion/motivation for doing so would have been to have different mounting arrangements (column 3, lines 31-33).
12. Referring to claim 13, Ashby discloses an amplifier coupled between the converter and speaker to amplify the analog signal (column 5, lines 56-58).
13. Referring to claim 16, Ashby discloses that the decryption comprises software (column 8, lines 35-39). Ashby states that the device is designed to perform the encryption/decryption, which includes storing software to perform the decryption.
14. Referring to claim 17, Ashby discloses memory for storing an encryption key (column 8, lines 48-49).
15. Referring to claim 20, Ashby discloses:

- q. A microphone for receiving an audible input and converting said analog input into an analog signal (column 5, lines 4-6).
  - r. A digitizer for creating a digital signal from said analog signal, and a voice coding device for creating a voice coded signal from said digital signal (column 5, lines 6-9).
  - s. Encrypting said voice coded (column 5, lines 14-18).
  - t. A modulator coupled to receive said encrypted signal for generating an analog output capable of being received by a two way radio (column 5, lines 21-23).
  - u. A cable connected to said two way radio to provide said analog output (column 7, lines 4-8).
  - v. Wirelessly transmitting an analog output broadcast signal (column 9, lines 34-35).
16. Ashby does not explicitly disclose that the cable is detachable. However, Henderson discloses a radio with a detachable control plate, removable head and cable (column 3, lines 11-12). Ashby and Henderson are analogous art because they are from the same field of endeavor, radio communication. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Ashby and Henderson before him or her, to modify the radio of Ashby to include the detachability of Henderson. The suggestion/motivation for doing so would have been to have different mounting arrangements (column 3, lines 31-33).

17. Referring to claim 21, Ashby discloses an amplifier coupled to the digitizer and microphone for amplifying said electrical signal (column 7, lines 39-40).

18. Referring to claim 22, Ashby discloses:

w. Receiving a wireless secure analog broadcast signal (column 9, lines 34-35).

x. A cable to provide encrypted analog signal from said two way radio to the microphone unit (column 7, lines 4-8).

y. Demodulating the signal to a voice coded signal (column 11, lines 68-column 12, line 2).

z. Decrypting said voice coded signal (column 12, lines 12-14).

aa. Generating a digital signal from said decrypted voice coded signal (column 12, lines 14-15).

bb. Converting said digital voice signal to said analog electrical signal (column 12, lines 18-19).

cc. A speaker for outputting said analog signal to an audio signal (column 12, lines 23-25).

19. Ashby does not explicitly disclose that the cable is detachable. However, Henderson discloses a radio with a detachable control plate, removable head and cable (column 3, lines 11-12). Ashby and Henderson are analogous art because they are from the same field of endeavor, radio communication. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Ashby and Henderson before him or her, to modify the radio of Ashby to include the detachability of



Henderson. The suggestion/motivation for doing so would have been to have different mounting arrangements (column 3, lines 31-33).

20. Referring to claim 23, Ashby discloses an amplifier coupled between the converter and speaker to amplify the analog signal (column 5, lines 56-58).

21. Referring to claim 24, Ashby discloses:

dd. A microphone for receiving an audible input and converting said analog input into an analog signal (column 5, lines 4-6).

ee. A digitizer for creating a digital signal from said analog signal, and a voice coding device for creating a voice coded signal from said digital signal (column 5, lines 6-9).

ff. Encrypting said voice coded (column 5, lines 14-18).

gg. A modulator coupled to receive said encrypted signal for generating an analog output capable of being received by a two way radio (column 5, lines 21-23).

hh. A cable connected to said two way radio to provide said analog output (column 7, lines 4-8).

ii. Wirelessly transmitting an analog output broadcast signal (column 9, lines 34-35).

jj. A cable to provide encrypted analog signal from said two way radio to the microphone unit (column 7, lines 4-8).

kk. Demodulating the signal to a voice coded signal (column 11, lines 68-column 12, line 2).

- ll. Decrypting said voice coded signal (column 12, lines 12-14).
  - mm. Generating a digital signal from said decrypted voice coded signal (column 12, lines 14-15).
  - nn. Converting said digital voice signal to said analog electrical signal (column 12, lines 18-19).
  - oo. A speaker for outputting said analog signal to an audio signal (column 12, lines 23-25).
22. Claims 8 and 18 are rejected under 35 USC 103 (a) as being obvious over either Ashby in view of Henderson as applied above and further in view of John Hardwick's US Patent 6,131,084. Ashby in view of Henderson disclose all the limitations of the parent claims. Ashby in view of Henderson does not explicitly disclose the vocoder being AMBE. However, Hardwick discloses an AMBE vocoder (column 3, line 10). Ashby in view of Henderson and Hardwick are analogous art because they are from the same field of endeavor, signal encoding. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Ashby in view of Henderson and Hardwick before him or her, to modify the vocoder of Ashby in view of Henderson to include AMBE of Hardwick. The motivation for doing so would have been that AMBE is a more robust vocoder (column 3, lines 12-13).
23. Claims 9 and 19 are rejected under 35 USC 103 (a) as being obvious over Ashby in view of Henderson as applied above and further in view of Raymond Pang et al's US

Patent 6,366,117 B1. Ashby in view of Henderson disclose all the limitations of the parent claim. Ashby in view of Henderson does not appear to explicitly disclose using AES for encryption/decryption. However, Pang discloses that AES is a more secure encryption algorithm (column 1, lines 42-43). Ashby in view of Henderson and Pang are analogous art because they are from the same field of endeavor, encryption. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Ashby in view of Henderson and Pang before him or her, to modify the encryption/decryption of Ashby in view of Henderson to include AES of Pang. The motivation for doing so would have been that AES is more secure (column 1, lines 42-43).

### ***Conclusion***

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cordelia Kane whose telephone number is 571-272-7771. The examiner can normally be reached on Monday - Thursday 8:00 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CPK

Cordelia Kane  
Patent Examiner  
Art Unit 2132

  
GILBERTO BARRON JR.  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100